

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 to 8. (canceled)

Claim 8. (currently amended) A device for recovering a feedstock liquid, comprising a remaining feedstock liquid collector, placed between a dripping nozzle or dripping nozzles of a dripping nozzle device that comprises the dripping nozzle or dripping nozzles for dripping the feedstock liquid including uranyl nitrate to an aqueous ammonia solution, the dripping nozzle or dripping nozzles being placed above an aqueous ammonia solution reservoir so that an opening or openings of the dripping nozzle or dripping nozzles are directed downward and face the aqueous ammonia solution, wherein the feedstock liquid is transferred from a feedstock liquid reservoir having a temperature-controlling function through a feedstock liquid transferring passage to the dripping nozzle or nozzles and ~~[[an]]~~ the aqueous ammonia solution reservoir in which an aqueous

ammonia solution is stored, said remaining feedstock liquid collector for receiving a remainder of the feedstock liquid remaining in the feedstock liquid transferring passage when the dripping of the feedstock liquid from the dripping nozzle or nozzles to the aqueous ammonia solution is stopped; and a feedstock liquid remainder transferring passage for transferring the remainder to the feedstock liquid reservoir.

Claims 9 to 11. (canceled)

Claim 12. (currently amended) [[The]] A device for supplying a feedstock liquid ~~according to claim 10~~[[,]] ~~wherein the light irradiator is~~ comprising a strobe light irradiator for emitting a light that flashes on and off periodically for irradiating with the strobe light irradiator drops of a feedstock liquid that include uranyl nitrate, the drops being dripped from a dripping nozzle device, wherein the dripping nozzle device comprises dripping nozzles and the drops are dripped from each of the dripping nozzles; and flow regulators, each of said flow regulators controls an amount of the feedstock liquid to be supplied to each dripping nozzle from a feedstock liquid

reservoir in which the feedstock liquid is stored, depending on conditions of the falling of the drops irradiated with the strobe light.

**Claim 13. (currently amended)** A device for supplying a feedstock liquid ~~according to claim 10~~ ~~[[,]]~~ further comprising a continuum irradiator for irradiating with continuum light drops of a feedstock liquid that include uranyl nitrate, the drops being dripped from a dripping nozzle device, wherein the dripping nozzle device comprises dripping nozzles and the drops are dripped from each of the dripping nozzles; flow regulators, each of said flow regulators controls an amount of the feedstock liquid to be supplied to each dripping nozzle from a feedstock liquid reservoir in which the feedstock liquid is stored, depending on conditions of the falling of the drops irradiated with the continuum light irradiator; photosensors for sensing the light emitted by the continuum light irradiator ~~[[,]]~~ ; and a controller for controlling the flow regulators upon an input of a sensing signal outputted by the photosensors so that the nozzles drip at the same dripping rate, the drops dripped from each

nozzle have the same volume, and a drop dripped from one of the nozzles has the same volume as a drop dripped from any other one of the nozzles.

**Claim 14. (currently amended)** A device for solidifying the surfaces of drops, comprising an ammonia gas sprayer with ammonia gas-spraying nozzles, each spraying ammonia gas to each of paths along which drops of the feedstock liquid that ~~includes~~ include uranyl nitrate fall to an aqueous ammonia solution stored in an aqueous ammonia solution reservoir, the drops being dripped from a dripping nozzle device wherein the dripping nozzle device comprises nozzles and the drops are dripped from the nozzles, ~~and wherein the distance between the ends of the dripping nozzles and the ends of the ammonia gas spraying nozzles is from 10 mm to 40 mm~~ [[,]] the shortest distance between the paths along which the drops dripped from the ends of the dripping nozzles fall and the ends of the ammonia gas spraying nozzles is from 3 mm to 15 mm ~~[[,]] and the flow rate of the ammonia gas sprayed from the ammonia gas spraying nozzles is from 3 L/min to 25 L/min~~ wherein the aqueous ammonia solution reservoir comprises an

aqueous ammonia solution discharger for discharging the aqueous ammonia solution stored therein to keep constant the distance between the ends of the dripping nozzles and the surface of the aqueous ammonia solution, wherein the aqueous ammonia solution discharger has an overflow discharging hole in the circumferential sidewall.

Claims 15 and 16. (canceled)

Claim 17. (previously presented) The device for solidifying the surfaces of drops according to claim 14, wherein the flow rates of the ammonia gas sprayed from the respective ammonia gas-spraying nozzles are adjustable.

Claim 18. (currently amended) A device for solidifying the surfaces of drops according to claim 14, ~~the aqueous ammonia solution reservoir further comprising an aqueous ammonia solution discharger for discharging the aqueous ammonia solution stored therein to keep constant the distance between the ends of the dripping nozzles and the surface of the aqueous ammonia solution~~, wherein the distance between the ends of the dripping nozzles

and the ends of the ammonia gas spraying nozzles is from 10 mm to 40 mm, the shortest distance between the paths along which the drops dripped from the ends of the dripping nozzles fall and the ends of the ammonia gas spraying nozzles is from 3 mm to 15 mm, and the flow rate of the ammonia gas sprayed from the ammonia gas spraying nozzles is from 3 L/min to 25 L/min.

**Claims 19 to 25. (canceled)**

**Claim 26. (currently amended)** ☐ The device for recovering a feedstock liquid according to claim 8, wherein the dripping nozzle device comprises nozzles, and the device further comprising a single vibrator for vibrating the nozzles simultaneously.

**Claim 27. (previously presented)** The device for recovering a feedstock liquid according to claim 8, wherein the feedstock liquid transferring passage comprises a feedstock liquid supplier for supplying the feedstock liquid to the nozzles substantially at a constant flow rate and without pulsation.

**Claim 28. (currently amended)** **[[A]]** The device for supplying a feedstock liquid according to claim **[[10]]** 12, the dripping nozzle device further comprising a single vibrator for vibrating the nozzles simultaneously.

**Claim 29. (currently amended)** **[[A]]** The device for supplying a feedstock liquid according to claim **[[10]]** 12, the dripping nozzle device further comprising a feedstock liquid supplier for supplying the feedstock liquid to the nozzles substantially at a constant flow rate and without pulsation.

**Claim 30. (currently amended)** **[[A]]** The device for solidifying the surfaces of drops according to claim 14, the dripping nozzle device further comprising a single vibrator for vibrating the nozzles simultaneously.

**Claim 31. (currently amended)** **[[A]]** The device for solidifying the surfaces of drops according to claim 14, the dripping nozzle device further comprising a flow regulator

and a volume of each of the drops for each nozzle, wherein the flow regulator has a flow regulator valve and a flowmeter.

**Claim 32. (currently amended) [[A]]** The device for solidifying the surfaces of drops according to claim 30, the dripping nozzle device further comprising a feedstock liquid container capable of containing a predetermined volume of the feedstock liquid supplied from a feedstock liquid reservoir in which the feedstock liquid is stored, the container having an inner volume larger than the inner volume of each of the dripping nozzles, wherein the container supplies the contained feedstock liquid to all the dripping nozzles by the force of gravity.

**Claim 33. (previously presented)** The device for solidifying the surfaces of drops according to claim 32, wherein the feedstock liquid container has a horizontal section, the area of which is larger than the area of the horizontal section of each of the dripping nozzles.



**Claim 34. (previously presented)** The device for solidifying the surfaces of drops according to claim 32, wherein the feedstock liquid container is directly connected to all the dripping nozzles.

**Claim 35. (previously presented)** The device for solidifying the surfaces of drops according to claim 32, wherein the respective ends of all the dripping nozzles are provided with an edge thinned in the direction of the falling of the drops.

**Claim 36. (currently amended)** An apparatus for producing ammonium diuranate particles, which comprises:

(1) a dripping nozzle device, comprising dripping nozzles for allowing a feedstock liquid that includes uranyl nitrate to fall in drops to an aqueous ammonium solution stored in an aqueous ammonia solution reservoir, wherein the dripping nozzle device is placed above an aqueous ammonia solution reservoir so that openings of the dripping nozzle device are directed downward and face the aqueous ammonia solution;

(2) a device for recovering the feedstock liquid,  
comprising:

(2-1) a remaining feedstock liquid collector, placed between the dripping nozzles and the aqueous ammonia solution reservoir wherein the feedstock liquid is transferred from a feedstock liquid reservoir having a temperature-controlling function through a feedstock liquid transferring passage to the dripping nozzles, said remaining feedstock liquid collector for receiving a remainder of the feedstock liquid remaining in the feedstock liquid transferring passage when the dripping of the feedstock liquid from the dripping nozzles to the aqueous ammonia solution is stopped; and

(2-2) a feedstock liquid remainder transferring passage for transferring the remainder to the feedstock liquid reservoir;

(3) a device for supplying the feedstock liquid comprising a light irradiator for irradiating the drops with light, and flow regulators, each of which controls an amount of the feedstock liquid to be supplied to each dripping nozzle from the feedstock

liquid reservoir, depending on conditions of the falling of the drops irradiated with the light;

(4) a device for solidifying the surfaces of the drops, comprising an ammonia gas sprayer with ammonia gas-spraying nozzles, each spraying ammonia gas to each of paths along which the drops fall to the aqueous ammonia solution, wherein the distance between the ends of the dripping nozzles and the ends of the ammonia gas spraying nozzles is from 10 mm to 40 mm, the shortest distance between the paths and the ends of the ammonia gas spraying nozzles is from 3 mm to 15 mm, and the flow rate of the ammonia gas sprayed from the ammonia gas spraying nozzles is from 3 L/min to 25 L/min; and

(5) a device for circulating the aqueous ammonia solution, comprising an aqueous ammonia solution circulating path through which the aqueous ammonia solution is circulated and returned to the aqueous ammonia solution reservoir, from a lower part of the reservoir, whereby ammonium diuranate particles produced by a reaction between uranyl nitrate and ammonia flow upward in the aqueous ammonia solution.

**Claim 37. (previously presented)** The apparatus for producing ammonium diuranate particles according to claim 36, wherein the device for circulating the aqueous ammonia solution comprises a pipe for circulating the aqueous ammonia solution connected to a side hole formed in a sidewall of the aqueous ammonia solution reservoir and a bottom hole formed in the lower part thereof; and a pump placed in the pipe for circulating the aqueous ammonia solution.

**Claim 38. (previously presented)** The apparatus for producing ammonium diuranate particles according to claim 37, wherein the side hole is covered with a member for preventing solids in the aqueous ammonia solution reservoir from flowing into the pipe for circulating the aqueous ammonia solution.

**Claim 39. (previously presented)** The apparatus for producing ammonium diuranate particles according to claim 36, wherein the aqueous ammonia solution reservoir has a bottom provided with a collecting pipe and an opening/closing device capable of opening and closing the collecting pipe.

**Claim 40. (new)** The device for supplying a feedstock liquid according to claim 13, the dripping nozzle device further comprising a single vibrator for vibrating the nozzles simultaneously.

**Claim 41. (new)** The device for supplying a feedstock liquid according to claim 13, the dripping nozzle device further comprising a feedstock liquid supplier for supplying the feedstock liquid to the nozzles substantially at a constant flow rate and with pulsation.

**Claim 42. (new)** The device for supplying a feedstock liquid according to claim 12, wherein the nozzles are aligned with the axes thereof being parallel and with the ends thereof being in lines, wherein the flow regulators, each of which is controlled so that the drops are observed being aligned horizontally when the drops fall simultaneously from all the nozzles.

**Claim 43. (new)** The device for supplying a feedstock liquid according to claim 13, wherein the controller converts the

detection signals outputted by photosensors into positive pulse signals, and sends a drive-control signal to the corresponding flow regulator, when the pulse signals derived from the respective detection signals do not synchronize.

**Claim 44. (new)** The device for solidifying the surfaces of drops according to claim 14, wherein the ammonia gas sprayer is placed above the opening end of the aqueous ammonia solution reservoir at a location where the sprayers do not block the opening end so that the path of the ammonia gas sprayed from each ammonia gas-spraying nozzle is perpendicular to the corresponding falling path of drops of the feedstock liquid dripped from the nozzles.

**Claim 45. (new)** The device for solidifying the surfaces of drops according to claim 44, further comprising an ammonia gas discharger being placed opposite the ammonia gas sprayer with the falling path in between, wherein the discharger discharges the sprayed ammonia gas.

**Claim 46. (new)** The device for solidifying the surfaces of drops according to claim 44, the aqueous ammonia solution reservoir further comprising an ammonia gas-supplying outlet for filling the reservoir with ammonia gas at a location above the surface of the aqueous ammonia solution on the sidewall of the aqueous ammonia solution reservoir.